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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/083,345 | 02/27/2002 | Rudolf Epple | 13632.0006 | 8249 |

33649 7590 09/21/2006

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EXAMINER

LEE, TOMMY D

ART UNIT PAPER NUMBER

2625

DATE MAILED: 09/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/083,345

Applicant(s)

EPPLE, RUDOLF

Examiner

Thomas D. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 26-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-12, 15-19 and 32 is/are allowed.
- 6) ☒ Claim(s) 1-4, 13, 14, 20-24, 26-31 and 33-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office action is responsive to applicant's amendment filed July 3, 2006.
Claims 1-24 and 26-35 are pending.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1-4, 13, 14, 20-24, 27 and 33-35 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,055,923 (Kitagawa et al.).

Kitagawa et al. disclose a reproduction method for printing wherein characteristic data of an original are transformed into data required for printing, comprising the steps of: defining a modified characteristic curve of printing which in relation to an ideal characteristic curve of printing has a maximum above an area coverage of 50% (noting Fig. 11C, maximum dot gain occurs at two values of halftone-dot area rate, as indicated by the two "bumps" in the curve G_3 , one of which is clearly greater than 50%); and transforming the original data into said data required for printing using the modified characteristic curve in order to control the dot gain in printing (procedure for recording halftone images described at column 12, line 44 – column 13, line 3). The modified characteristic curve of printing in relation to the ideal characteristic curve of printing corresponds to a dependence of a modified dot gain on the area coverage (dot gain (%) depends on halftone-dot area rate on halftone film (%), as shown in Fig. 11C). The maximum of the modified characteristic curve of printing in relation to the ideal

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characteristic curve of printing lies at an area coverage of between 50% and 70%, at approximately 60% area coverage (range of halftone-dot area rate in which blank elements have isolated shapes (corresponding to location of the “bump” on the right side of curve G_3) can be set down to about 65% (column 15, lines 41-52), which is close enough to read on “*approximately 60%*”). The maximum of the modified characteristic curve of printing is determined by a correlation of the theoretical area coverage and the dot gain (correlation of theoretical area coverage (correlation between halftone-dot area rate on halftone film (%)) and dot gain (dot gain (%)) shown in Fig. 11C, maximum of modified characteristic curve G_3 determined from graph) and is predefined by a mathematical function (dot gain defined as a function of halftone-dot area rate on printed matter and halftone-dot area rate on halftone film (column 13, lines 22-32)). The modified characteristic curve of printing has in relation to the ideal characteristic curve of printing a maximum percent dot gain of less than 30%, in the range of between 5% and 30%, at approximately 10% (maximum dot gain percentage, as shown in Fig. 11C, is about 13%, which is close enough to read on “*approximately 10%*”). Printing inks with increase density in the print are used for printing. A modified chromatic color tone characteristic curve of printing is used for the chromatic color tones (modified characteristic curve obtained for magenta shown in Fig. 11C; characteristic curves for other colors (cyan, yellow, black) inherently obtained for the printing of halftone dots for each color component). A CMYK set of process colors is used for printing (Y, M, C and K color components recorded on a single recording film (column 8, line 65 – column 9, line 2)). The transformation from the original to printing data comprises a color space

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transformation from an RGB color space to a CMYK color space (generated color separation signals having R,G and B components converted into density signals for Y, M, C and K printers (column 8, lines 44-64)). The printing process is an offset printing process (printing plates for respective color inks fabricated (column 12, lines 66-68), indicative of an offset printing process). The modified characteristic curve of printing is entered in a color management system (color halftone dots managed according to the range of halftone-dot area rate in the dot gain curve where halftone dot elements or blank elements having isolated shapes can be set (column 15, lines 41-52)).

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 26 and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitagawa et al. as applied to claim 1 above, and further in view of Japanese Document 10-35128 (Suzuki).

Kitagawa et al. do not disclose the use of printing inks with increased density, compared with standard ink densities of various color inks. Suzuki discloses a printing method wherein high-density ink is used so that high precision printing can be provided without making dot gains large (read ABSTRACT: PROBLEM TO BE SOLVED).

Because of the denseness of the ink, the ink amount for carrying a pigment required for halftone dots can be small, by which dot gains of the halftone dots become small and the ink raised state on respective halftone dots is not collapsed but remains sharp (read ABSTRACT: SOLUTION). Smaller dot gains result in a more faithfully reproduced

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image, and thus one of ordinary skill in the art would have been motivated to use higher density inks as opposed to standard density inks, such as disclosed in Suzuki, in the method disclosed in Kitagawa et al.

Allowable Subject Matter

6. Claims 5-12, 15-19 and 32 are allowed.
7. The following is a statement of reasons for the indication of allowable subject matter: Reasons for indication of allowable subject matter are as set forth in the prior Office action (mailed April 5, 2006), at page 6.

Response to Arguments

8. Applicant's arguments filed in response to the prior rejection of claims 1-4, 13, 14, 20-24, 27 and 33-35 under 35 U.S.C. 102(b), and claims 25, 26 and 28-31 under 35 U.S.C. 103(a), have been fully considered but they are not persuasive. Specifically, applicant states that "Kitagawa et al. does not disclose the idea of using a modified characteristic curve, as claimed, instead of an actual curve of printing," and "[i]n Figures 11A to C (explained in col. 3, lines 40-44), Kitagawa et al. shows characteristic curves of dot gain which are experimental curves. Kitagawa et al., does not disclose or remotely suggest the use of a modified characteristic curve of printing which in relation to an ideal characteristic curve of printing has a maximum above an area coverage of 50% for the transformation of the original data into data required for printing." (see page 10 of applicant's response) Contrary to applicant's assertion, Kitagawa et al. disclose the modified characteristic curve having a maximum above an area coverage of 50%. As mentioned above, maximum dot gain occurs at two values of halftone-dot area rate,

as indicated by the two “bumps” in the curve G_3 , one of which is clearly greater than 50% (note Fig. 11C). The characteristic curve shown in Fig. 11C is the result of modifying the shape of the halftone dot (column 15, lines 23-40).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

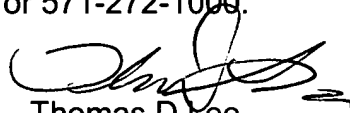
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas D. Lee whose telephone number is (571) 272-7436. The examiner can normally be reached on Monday-Friday, 7:30-5:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Thomas D Lee
Primary Examiner
Technology Division 2625

tdl
September 12, 2006